

U.S. Environmental Protection Agency
Science Advisory Board
Radiation Advisory Committee (RAC) RadNet Review Panel

Summary Minutes of Public Conference Call Meeting¹
June 12, 2006

Committee: Radiation Advisory Committee (RAC) RadNet Review Panel of the U.S. Environmental Protection Agency's (EPA's) Science Advisory Board (SAB). (See Roster - Attachment A.)

Date and Time: Monday, June 12, 2006 from 1:00 p.m. to 4:00 p.m. eastern standard time (See Federal Register Notice - Attachment B).

Location: This is a conference call with no location announced. All participants were connected via the conference lines.

Purpose: The purpose of this public conference call meeting is for the RAC's RadNet Review Panel to complete closure edits on their May 31, 2006 Working Review Draft Report #3 (See Attachment D) prepared by the RAC RadNet Review Panelists in response to this advisory activity.² The RAC's RadNet Review Panel's draft report is in direct response to the Environmental Protection Agency's draft document entitled "*Expansion and Upgrade of the RadNet Air Monitoring Network, Vols. 1 & 2 Concept and Plan*," dated October 2005. (See Attachment E.)

SAB/RAC RadNet Review Panel Attendees: Panel Members Dr. Jill Lipoti, RAC and RadNet Review Panel Chair, Dr. Bruce Boecker, Dr. Antone Brooks, Dr. Gilles Bussod, Dr. Brian Dodd, Dr. Shirley Fry, Dr. William Griffith, Dr. Helen Grogan, Dr. Richard Hornung, Mr. Richard Jaquish, Dr. Jan Johnson, Immediate Past RAC Chair (on the line at 1:18 pm until 2:48 pm); Dr. Bernd Kahn, Dr. Jonathan Links, Dr. Gary Sandquist, Dr. Richard Vetter, and Ms. Susan Wiltshire were present. (See Attachment A); Dr. K. Jack Kooyoomjian (Designated Federal Officer) and Dr. Anthony F. Maciorowski, Associate Director of Science - SAB Staff Office, participated.

¹ NOTE: Please note that these minutes represent comments that are individual statements and opinions and are not necessarily consensus comments at this stage of the process in the review of any given topic. In all cases, the final SAB report to the EPA Administrator represents the consensus on the topic.

² See also the Feb 28, 2005 minutes where the RAC was briefed by the Agency's ORIA staff on the proposed National Monitoring System (NMS) Upgrade to the Environmental Radiation Ambient Monitoring System (ERAMS), now referred to as RadNet. See also the Dec. 1, 2005 minutes for the first public conference call of the RAC's RadNet Review Panel, the Dec. 19-20, 2005 minutes of the first face-to-face meeting of the RAC's RadNet Review Panel, as well as the March 20 and April 10, 2006 minutes of the public conference call editing sessions.

Agency Staff Attendees: ORIA, Washington, DC: Dr. Mary E. Clark and Mr. Adam Klinger; ORIA/National Air and Radiation Environmental Laboratory (NAREL) staff, Montgomery, AL: Dr. John Griggs, Robert Lowry, Charles (Chuck) Petko, and Mr. Scott Teloski.

Public Attendees: There were no attendees from the public.

Meeting Summary: The meeting followed the issues and general timing as presented in the meeting Agenda (see Meeting Agenda - Attachment C). Other than open discussions with EPA staff, no comments, either verbal or written were provided to the Panel by the interested public during the course of this public conference call meeting.

Welcome and Introductions: Dr. K. Jack Kooyoomjian, Designated Federal Officer (DFO), opened the meeting at approximately 1:03 pm with identification of the participants logging into the call and with opening remarks. He introduced himself as the DFO for the Radiation Advisory Committee's (RAC) RadNet Review Panel, explained the purpose of the call, indicating that this Panel operates under the requirements of the Federal Advisory Committee Act (FACA) and is chartered to conduct business under the SAB Charter. He explained that, consistent with FACA and with EPA policy, the deliberations of the RAC's RadNet Review Panel are conducted in public meetings, for which advance notice is given. He explained that he is present to ensure that the requirements of FACA are met, including the requirements for open meetings, for maintaining records of deliberations of the RAC's RadNet Review Panel, and making available the public summaries of meetings, as well as providing opportunities for public comment.

Dr. Kooyoomjian also commented on the status of this Panel's compliance with Federal ethics and conflict-of-interest laws. The RAC's RadNet Review Panel follows the Committee and Panel Formation Process, as well as determinations made by the SAB staff and others pertaining to confidential financial information protected under the Privacy Act. Each Panelist has complied with all these provisions; there are no conflict-of-interest or appearance issues for any of the Panelists, nor did any individual need to be granted a waiver or be recused. Dr. Kooyoomjian further noted that the Form 3110-48 Financial Disclosure and Ethics Training was completed by all Panelists and is on file at the SAB, that there is no need for disclosure, and that there is no particular matter that may pose a potential conflict of interest. He advised that the Panel should briefly introduce themselves and their interests in relation to the RadNet review topic just to inform the interested parties and the public of their relations and experiences to the issues pertaining to the discussions to take place today. He also advised that the biosketches of each Panelist are posted on the SAB website.

Dr. Lipoti provided some brief opening remarks at 1:12 pm, welcoming members and participants (Roster, Attachment A), reviewed the meeting agenda (Attachment C). Dr. Lipoti asked the members of the ORIA Staff and any public participants who may be on the line to also introduce themselves. After some brief remarks regarding the status of the current draft at 1:12 p.m., Dr. Lipoti opened the floor to any issues, edits or big points that each Panelist might wish to highlight, noting that this current May 31, 2006 draft (See Attachment D) now contains the

Executive Summary and Letter to the Administrator for review by the Panel during this closure conference call.

Overview of the Meeting:

A Discussion of the Big Issues or Special Points:

The Panelists touched on some fine points, such as further editorial comments, how the original draft document dealt with the test procedures, and the need for recommendations involving test exercises in the current draft. The Panelists observed that this newer draft reduced the repetitive language. Also, more reference citations were offered by the Panel, in addition to the previous draft which picked up citations on some recommended elements of good modeling practices, for instance.

The Panel discussed radioactive analyses that occur in various states, such as the State of Georgia, and how those systems might provide additional capabilities for coverage, if needed for enhancing RadNet, as well as for RadNet to provide valuable supplemental information to the states and localities. A number of logistical issues and technical complications toward compatibility were discussed in order to eventually develop data transmission, as well as data processing capability. It was thought that such capabilities might be accomplished with modest funds, and that an order of magnitude increase in sites (e.g., 40 instead of 4), and collectively (2000, instead of 180 sites) might be available. The thought was that states could do the same things that EPA is doing, if they wanted to deal with the “integration” of the state monitors. ...and EPA could move to selectively integrate the state data into the system. It was suggested that these enhancements might be viewed as long-range, rather than short-range vision in answer the charge questions.

At 1:26 p.m., Dr. Lipoti invited the Agency to comment on some of these points that were being discussed. Dr. Mary Clark’s first comment was that the Panel may be talking about two different broad things, namely EPA accessibility and Quality Control (QC) over the numbers, as opposed to all other data systems to provide information. She noted that it may not be the same as an overall network managed at EPA, and such enhancement to the network may actually take resources away from the Agency.

Dr. John Griggs noted that in the earlier days, the ORIA/NAREL staff developed a proposal, but there were problems with such implementation issues as sampling frequency, installing and changing filters, maintaining and calibrating equipment monitors, etc. He advised that EPA is mapping and inventorying a GIS system of all monitors around the country. One Panel member observed that the recommendation for network enhancements should continue, if it is attractive to do so. It was suggested by another Panel member that the SAB report could include a recommendation that EPA might consider to accept data of varying quality, if it is available during an accident or incident. The Panel acknowledged that in the event of an emergency, EPA will coordinate with all parties, and presumably these other entities will report

up the line. Therefore, the responsibility for cross-calibration may be placed on someone other than EPA. It was clear to the RadNet Review Panelists that they were still recommending that the Agency inventory the various systems out there as a step toward integration by the various parties. A discussion followed on the resources issue, the clear and obvious need to leverage resources within the Agency and with the other entities. The Panel wanted to make it clear that leveraging resources should not be interpreted as diverting existing resources within the Agency.

One Panelist observed that some radionuclides are not listed, and if you look at “regions of interest,” for instance in a NaI detector, a particular radionuclide shows up everywhere. EPA uses these “regions of interest” to make sure these radionuclides are from background, and if there is a spike, then EPA looks at the entire spectrum. In order to sort these matters out correctly, it is extremely important that the mission include 24-hour availability of these professionals to properly interpret such measurements. Everyone agreed on this point.

One Panelist suggested adding the charge questions to the Executive Summary. This was agreed as an excellent suggestion by everyone on the Panel, as well as the Agency participants. By listing the charge questions, the Executive Summary flowed better and made much more sense to the Panelists and the EPA ORIA Staff.

A number of editorial comments were offered such as pertaining to bolding and unbolding, MDA versus PAG, the philosophy of the MDA, dose versus exposure, the traditional versus SI units, the use of Roentgens as output of RadNet, the use of raw data versus converted units, internal dose versus exposure, etc. It was thought that the Panel could use SI units and put the traditional units in parentheses. A discussion followed on the National Council on Radiation Protection and Measurements (NCRP) Commentary #19 (pertaining to “Key Elements of Preparing Emergency Responders for Nuclear and Radiological Terrorism”), and it was agreed that the language should state that the Review Panel recognizes that Roentgens will be used, and that it was recognized that raw data is what is needed as inputs to the models. There was recognition also that conversion of units also depends on tissue types, etc.

A number of text edits were suggested by the Panel to clarify what was intended. For instance, it was suggested to change “untrained individuals” to “volunteers.” A discussion followed that with volunteers, they may not be able to be counted on in an emergency. The Panel asked the Agency staff to comment on this. The Agency recognizes that each EPA Region has volunteers with some general background and training. However, they typically are people who are not highly experienced in radiation monitoring. There is an option of using EPA Staff and support contractors in certain instances. A discussion followed as to exactly what the volunteers do in the field. It is more than simply plugging in the monitor, and it does involve changing the filter and other activities. The Panel discussed terms such as “volunteer,” “authorized,” “credentialed” and “supervised” employees and what would be appropriate in the draft text edits.

Public Comment: At 2:28 p.m., Dr. Lipoti asked if there were any members of the public who wished to address the Panel. Nobody from the public was present, and therefore no public comments were offered at this time, nor were any written comments provided.

After a call for public comments, and hearing none, the public comment period concluded at 2:28 p.m., and the Panel resumed its discussion of recommended edits and a review of the page-by-page edits of the May 31, 2006 review draft (See Attachment D) commencing on page 28.

Continued Panel Discussion:

One Panelist suggested adding additional justification language on page 28 for supporting the use of more robust models for protecting the public, as well as language supporting more aggressive use of historical meteorological data on page 20, line 30. ...in other words, the recommendation is to encourage the Agency to look back at historical data, as well as to look forward at meteorological data.

One Panelist suggested deleting the language regarding projections of excess cancer deaths. Other suggestions were offered regarding the need to clarify where EPA's responsibility ends and where other entities pick up. A number of edits were suggested in the area of improved communication, messages to be given in an emergency, the possible use of mock trial runs to be conducted by EPA to be sure that they are conveying the messages that they intend, and generally managing the outputs from RadNet for proper interpretation and clear messages for the public such as whether the levels are above, below, or at the protective action guide (PAG).

Feedback from Agency Staff: At 2:41 p.m., Dr. Lipoti asked for feedback from the Agency Staff. Dr. Mary Clark reiterated the Agency Staff's appreciation for this effort, and stressed that they especially value today's comments and feedback as the edits are being refined to the May 31, 2006 RadNet working draft. With regard to the first question whether the Panel has adequately responded to the questions posed in the charge, the short answer is "Yes."

With regard to the second question whether any statement or responses made in the draft are unclear, Dr. Clark, representing her colleagues, indicated that they appreciate today's Panel discussion and clarification with the text edits, and do not find the need to add anything else at this time.

With regard to the third question whether there are any technical errors, the Agency Staff caught a few minor technical errors in the current May 31, 2006 draft, have provided additional references, and will forward this to the RadNet DFO, Dr. Kooyoomjian for use by the Panel.

Dr. John Griggs voiced his personal appreciation for all the work by the RAC's RadNet Review Panel on this activity. The feedback session with the Agency staff concluded at 2:45 pm.

Continued Panel Discussion:

The Panel discussed the specific references needed for addition to the current draft, including references to the Hanford and Los Alamos fires, the International Atomic Energy

Agency (IAEA) report on audits, etc. The Panel offered a number of minor comments on data points, statistical tests, use of examples to make certain points, etc.

The Panel completed their edits through the entire text by 2:58 pm EST.

Summary & Action Items from the June 12, 2006 Public Conference Call, 1-4 pm EST:

At 2:58 pm, Dr. Lipoti provided a brief summary. Dr. Lipoti will edit the text following receipt of all Panel comments by Close-of-Business June 23, 2006.

Dr. Kooyoomjian will edit and format the final draft for circulation to the RAC's RadNet Review Panel via email concurrence.

A discussion followed on expectations of the upcoming Charter Board's Quality Review Process.

It was understood by all the Panelists present that their edits should be submitted to Dr. Lipoti, with a cc to Dr. Kooyoomjian no later than Close-of-Business Friday, June 23, 2006. Dr. Lipoti thanked all the participants and indicated that there is no plan for another public conference call. She indicated that we will conduct an email concurrence cycle, and then proceed to the Charter Board for closure.

There being no additional business to be discussed, Dr. Lipoti adjourned the meeting at 3:06 pm on Monday, June 12, 2006.

Respectfully Submitted:

Certified as True:

_____/S/
K. Jack Kooyoomjian, Ph.D.
Designated Federal Official
Radiation Advisory Committee (RAC)
RadNet Review Panel

_____/S/
Dr. Jill Lipoti, Chair
Radiation Advisory Committee (RAC)
RadNet Review Panel

List of Attachments

The following meeting materials are available on the SAB Web site, <http://www.epa.gov/sab>, at the [June 12, 2006 Radiation Advisory Committee \(RAC\) RadNet Review Panel Meeting](#) page.

<u>Attachment</u>	<u>Description</u>
A	Radiation Advisory Committee (RAC) RadNet Review Panel Roster dated February 15, 2006
B	<u>Federal Register</u> Notice: March 1, 2006, Vol. 71, No. 40, pages 10501-10502
C	June 12, 2006 Meeting Agenda dated June 1, 2006
D	RadNet Working Draft Report #3, dated May 31, 2006

The following meeting materials are available in hardcopy from the SAB Staff Office, U.S. Environmental Protection Agency (MC-1400R), 1200 Pennsylvania Ave, NW, Washington, DC 20460:

<u>Attachment</u>	<u>Description</u>
E	ORIA Review Document entitled “ <i>Expansion and Upgrade of the RadNet Air Monitoring Network, Volume 1 & 2, Concept and Plan,</i> ” Prepared for the Radiation Advisory Committee RadNet Review Panel, Science Advisory Board, U.S. Environmental Protection Agency, Prepared by the office of Radiation and Indoor Air, U.S. Environmental Protection Agency